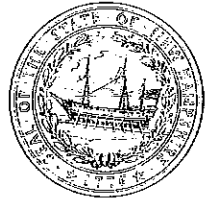




The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Thomas S. Burack, Commissioner

September 12, 2007

Mr. William H. Smagula, P.E., Director - Generation
Public Service Company of New Hampshire
P.O. Box 330
Manchester, NH 03105-0330

Re: Preliminary Responses to Requests for Bonus Carbon Dioxide and Nitrogen Oxides Allowances Pursuant to RSA 125-O and Env-A 2900

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Dear Mr. Smagula,

The New Hampshire Department of Environmental Services Air Resources Division ("DES") has reviewed the requests submitted by Public Service Company of New Hampshire ("PSNH") for bonus carbon dioxide (CO₂) allowances to be awarded pursuant to New Hampshire statute RSA 125-O:5, III and the Code of Administrative Rules Env-A 2900 and for conversion of discrete emissions reductions (DERs) of nitrogen oxides (NO_x) to bonus early NO_x allowances. Preliminary responses to these requests are attached. DES intends to finalize its responses after providing an opportunity for public comments.

In addition to the above, RSA 125-O:4, IV(a)(2) requires PSNH to transfer to the department all annual sulfur dioxide allocations provided under the federal acid rain program. Please complete that transfer at this time by submitting a Notice of Transfer directly to the United States Environmental Protection Agency Clean Air Markets Division. Please transfer the allowances into the State of New Hampshire holding account (999900000663). If you have any questions regarding this letter, please contact Joe Fontaine of my staff at 271-6794.

Sincerely,

Robert R. Scott
Director
Air Resources Division

cc: Laurel Brown, PSNH
Lynn Tillotson, PSNH

**New Hampshire Department of Environmental Services (DES)
Response to Public Service Company of New Hampshire (PSNH)
Regarding Request for Bonus Carbon Dioxide (CO₂) Allowances**

This response to PSNH's Request for Bonus CO₂ Allowances dated April 16, 2007 documents DES's preliminary determination regarding the amounts of allowances to be awarded to PSNH for future compliance with statute RSA 125-O, the Multiple Pollutant Reduction Program also known as the Clean Power Act, and regulation Env-A 2900, the Multiple Pollutant Annual Budget Trading and Banking Program. PSNH requested that DES allocate Bonus CO₂ Allowances for two projects:

1. The Northern Wood Power Project (NWPP); and
2. The Smith Hydro Project.

Market Value of CO₂ Allowances and Market Assessment

While the above projects were voluntary and could create "credits", the conversion of those voluntary "credits" into "allowances" for use under a mandatory "cap-and-trade" program, such as RSA 125-O, suggests that the value of "allowances" in other cap-and-trade markets is the more appropriate value for determination of the value of Bonus CO₂ Allowances. In fact, RSA 125-O:5, III clearly refers to allowances, rather than voluntary credits, as follows:

"For expenditures made by PSNH independent of SBC funds for energy efficiency, new renewable energy projects, or conservation and load management, the department shall provide emissions allowances to PSNH equivalent to the amount of such allowances that could have been purchased at market prices by the same dollar amount as the expenditure made."

When DES developed its "Clean Power Strategy" dated January 2001, DES stated on page 101 in Section 13.3 "Estimated CO₂ Control Costs" that:

"Regarding CO₂, DES believes that an international CO₂ allowance trading program is likely to develop by 2008."

The point (stated by PSNH on page 2 of its request) that Bonus CO₂ Early Allowances (as defined in Env-A 2903.17) may not be accepted by other jurisdictions for trading into other cap-and-trade markets, such as the European Union Emissions Trading Scheme (EU ETS), is not germane. The opposite point is more relevant, and that is that EU ETS Allowances would be accepted under New Hampshire's program, pursuant to RSA 125-O:4, IV.(c), as follows:

"Affected sources may use CO₂ allowances from federal or regional trading and banking programs, or other programs acceptable to the department, to comply with the CO₂ emission cap established under RSA 125-O:3, III."

The manner in which EU ETS Allowances would be accepted would be similar to the method already used in practice by DES under the similar Nitrogen Oxides (NOx) Budget Trading Program (Env-A 3200). The United States Environmental Protection Agency (EPA) prohibits New Hampshire sources, such as PSNH, from trading New Hampshire NOx allowances into EPA's NOx State Implementation Plan (SIP) Call Program. However, DES accepts NOx allowances from the EPA Program. The way that this works is the New Hampshire source transfers the EPA NOx Allowances into a New Hampshire retirement account and those allowances are retired under the EPA Program, and then DES creates an equivalent amount of allowances under Env-A 3200. This is a proven method of trading. Thus, PSNH could purchase and retire EU ETS Allowances, and DES would create (or transfer) an equivalent amount of CO₂ Allowances under RSA 125-O and deposit them into a PSNH account.

The United States has not yet enacted a federal CO₂ Allowance cap-and-trade program. The Regional Greenhouse Gas Initiative (RGGI) Program will not begin until 2009 and there is currently no RGGI allowance market. Allowance price forecasting using computer simulation or "modeling" to predict future RGGI allowance prices is also not appropriate for determining past allowance prices. Therefore, the EU ETS Allowance market is the only appropriate allowance market to use to assign market value to Bonus CO₂ Allowances.

Based on analysis of the market value of EU ETS Allowances, the appropriate market value to assign to Bonus CO₂ Allowances for the NWPP is 15.33 Euros per metric ton, the 3-year average market value for the period 2004-2006, and for the Smith Hydro Project is 18.25 Euros per metric ton, the 2-year average market value for the period 2005-2006. The averaging periods are consistent with those requested by PSNH and are the same periods during which PSNH incurred expenditures associated with each project. The equivalent U.S. dollar per short ton values, based on conversion factors of \$1.30/Euro and 0.9072 metric ton/short ton, are \$18.08/ton and \$21.52/ton, respectively.

Qualifying Costs of Expenditures Made

Subject to verification of expenditures with the New Hampshire Public Utilities Commission (PUC) after the Technical Session regarding Docket Number DE 07-057 scheduled for August 27, 2007 is held, the following expenditure amounts qualify for conversion to Bonus CO₂ Allowances:

1. \$73,440,753 for the NWPP

DES approves the full amount requested by PSNH for the NWPP.

2. \$215,872 for the Smith Hydro Project

Based on information received to date, DES approves 8% of the total amount (\$2,698,400) requested by PSNH for the Smith Hydro Project. As stated above, RSA 125-O:5, III refers to expenditures made for "new" renewable energy projects.

As stated in PSNH's Request, the project resulted in 8% more efficiency as a result of the new runner using less water flow per kilowatt and increasing the annual output of renewable hydro power. Thus, 92% of the project's total cost could have been associated with replacing the existing water turbine, and 8% of the total cost could have been associated with incremental new hydro power generation. Upon receipt of further documentation from PSNH clarifying why the full amount requested for this project qualifies under the statute, DES may approve the total requested amount at a later date.

Amounts of Bonus CO₂ Allowances

Based on the above, DES has determined that the following amounts should be allocated:

1. 4,062,000 for the NWPP
2. 10,000 for the Smith Hydro Project (assuming no further documentation from PSNH as described above)

Additional Minor Adjustments

In addition to the above allocations, the following minor adjustment was made:

Updated NH Clean Power Act CO₂ Allocations for 2007 and 2008 – Due to rounding, the sum of the CO₂ Allowances for individual units in the tables submitted by PSNH do not total the annual cap of 5,425,866 allowances. Accordingly, the allowance allocation for Merrimack Unit #2 was adjusted from 2,320,571 allowances to 2,320,570 allowances for 2007 and from 2,649,968 allowances to 2,649,969 allowances for 2008. Since the allocations were adjusted down by one in 2007 and up by one in 2008, the total allocations for the 2 year period remain as requested.

**New Hampshire Department of Environmental Services (DES)
Response to Public Service Company of New Hampshire (PSNH)
Regarding Request for Bonus Nitrogen Oxides (NOx) Allowances and
Request for Update of the Clean Power Act Allowance Tracking System**

This response to PSNH's Request for Bonus Early NOx Allowances dated April 16, 2007 documents DES's preliminary determination regarding the amount of banked NOx Discrete Emissions Reductions (DERs) under regulation Env-A 3100 that will be converted to allowances for future compliance with statute RSA 125-O, the Multiple Pollutant Reduction Program also known as the Clean Power Act, and regulation Env-A 2900, the Multiple Pollutant Annual Budget Trading and Banking Program. This response also documents DES's preliminary determination regarding allocations of NOx allowances to individual units and recordation of those allocations in the NH Clean Power Act Allowance Tracking System.

Conversion of DERs to Bonus NOx Allowances

PSNH requested that DES allocate 8,653 Bonus NOx Allowances for conversion of 8,653 NOx DERs created and banked in accordance with the provisions of Env-A 3100. The conversion of DERs to Bonus NOx Allowances constitutes use of the DERs. Therefore, 865 DERs (10% of the requested total 8,653 DERs) are being retired for environmental benefit, and the remaining 7,788 DERs (90% of the requested total 8,653 DERs) will be used to create 7,788 Bonus NOx Allowances.

In accordance with the provisions of Env-A 3104.06:

Env-A 3104.06 Environmental Contribution. At the time of use, DER users shall permanently retire ten percent of all DERs dedicated to that particular use, such that the amount of DERs required to demonstrate compliance shall equal the source's calculated need divided by 0.9.

The DER registry and the NH Clean Power Act Allowance Tracking System have been updated accordingly. The 7,788 Bonus NOx Allowances were deposited into a general account, as requested, in the NH Clean Power Act Allowance Tracking System, and PSNH must transfer these allowances into a compliance account at a later date prior to applying the allowances for their compliance obligation.

Retiring 10% of the requested total DERs for environmental benefit is consistent with the precedent set by DES as it now requires Newington Energy and Granite Ridge Energy to retire 10% of the DERs that they obtain from PSNH in exchange for allowances when they use DERs as New Source Review offsets.

As an aside, PSNH filed Notices of Generation for DERs created during 2006 and DES has entered 145 non-ozone season DERs for Newington Station, 534 non-ozone season DERs for Schiller Station, and 1,597 non-ozone season DERs for Merrimack Station into its DER registry. PSNH did not request conversion of these vintage 2006 DERs to

allowances at this time, and DES retained these DERs in its DER registry and did not convert them to allowances.

Summary of Allocations

The NH Clean Power Act established a cap of 3,644 tons on annual NOx emissions from the affected sources. Pursuant to Env-A 2906.03 as follows,

Env-A 2906.03 Allocation of NOx Allowances.

(a) The department shall calculate the difference between the annual NOx budget pursuant to Env-A 2905.02 and the seasonal NOx allowances allocated to PSNH pursuant to Env-A 3200.

The allowances allocated under Env-A 2900 shall be the difference between the annual cap and the allowances allocated under the existing seasonal NOx Budget Trading Program (Env-A 3200), such that the sum of the allowances allocated under Env-A 3200 and Env-A 2900 total 3,644 allowances, as shown below:

Allocation Vintage	Allocation Basis	Total PSNH Seasonal Allow. (already allocated)	Annual Cap	Max. Annual Allow.	Requested Allowances (not approved)	Difference = Schiller #5 Seasonal Allow.
2007	2004 – 2005	1,266	3,644	2,378	2,448	70
2008	2005 – 2006	1,000	3,644	2,644	2,682	38
2009	2006 – 2007	TBD	3,644	TBD	TBD	>0
2010	2007 - 2008	TBD	3,644	TBD	TBD	0

Because a total of 1,266 vintage 2007 ozone season allowances and 1,000 vintage 2008 ozone season allowances were allocated to PSNH, only 2,378 (3,644 – 1,266) additional vintage 2007 annual allowances and only 2,644 (3,644 – 1,000) additional vintage 2008 annual allowances shall be allocated under Env-A 2900. The differences between these amounts and the requested amounts (2,448 vintage 2007 allowances and 2,682 vintage 2008 allowances) are the 70 vintage 2007 allowances and 38 vintage 2008 allowances that were allocated to Schiller Unit #5. If DES were to allocate the amounts requested by PSNH, it would be double-counting these Schiller Unit #5 allowances.

DES would allow PSNH the option of retiring 70 vintage 2007 allowances and 38 vintage 2008 allowances that were allocated to Schiller Unit #5 under the seasonal program (Env-A 3200) and then DES would allocate the same amounts under the annual program (Env-A 2900). Generally, seasonal allowances are considered to be more valuable than annual allowances, and DES presumes that PSNH would not prefer this option.

While Schiller Unit #5 will not be a seasonal budget source in 2007, provided that combustion of wood comprises 49% or greater of the 2007 annual heat input to Schiller Unit #5, as shown in the above table it was allocated 70 vintage 2007 allowances and 38 vintage 2008 allowances. The above seasonal NOx allowances were allocated to Schiller Unit #5 on the basis of its 2-season average output for the seasons 2 and 3 years prior to the allocation year. In those seasons, Schiller Unit #5 did combust coal. Under this output-based allocation method, Schiller Unit #5 would cease to receive an allocation beginning in 2010, when the 2-season average output from 2007 and 2008 would not be counted, because it is likely that less than 51% of the annual heat input will be from coal. The output-based allocation method applies to Schiller Unit #5 under Env-A 2906.05 for the annual program, as well.

Update of the NH Clean Power Act Allowance Tracking System

Based on the DES approved annual (non-ozone season) allowance allocations of 2,378 vintage 2007 allowances and 2,644 vintage 2008 allowances in the above table, the adjusted allocations for the individual units are as follows:

Adjusted Unit Allocation for 2007 and 2008 Allowances

	DES Allocation		PSNH Requested	
	2007	2008	2007	2008
Merrimack Unit #1	402	503	414	511
Merrimack Unit #2	1,017	1,291	1,047	1,310
Newington Unit #1	663	446	682	452
Schiller Unit #4	143	200	148	203
Schiller Unit #6	153	204	157	206
	2,378	2,644	2,644	2,682

Additional Minor Adjustments

In addition to the above allocations, the following minor adjustment was made:

Updated 2008 Ozone Season Allocations – Due to rounding, non-PSNH NOx budget sources received 1,400 seasonal NOx allowances under Env-A 3200. Since the total seasonal NOx allowances allocated after deducting set-aside allowances is 2,400, this leaves a remainder of 1,000 seasonal NOx allowances to be allocated to PSNH, rather than 1,001 as shown in the table submitted by PSNH. Accordingly, the one allowance shown in the table for White Lake Station was deducted, and zero allowances are being allocated to White Lake Station. PSNH should transfer enough allowances to each unit's compliance account, including White Lake's account, at the end of each year to cover the emissions from each unit.